Next Generation Simulation (NGSIM) Peachtree Street Dataset

Identification Information

Citation

Citation Information

Originator: FHWA
Publication Date: 2016
Title: NGSIM Program Peachtree Street data
Edition: Version 1
Geospatial Data Presentation Form: NAD83 – Georgia State Plane Coordinate System, Georgia West

Publication Information

Publication Place: Washington, D.C.
Publisher: U.S. Department of Transportation Intelligent Transportation Systems Joint Program Office (JPO)
Online Linkage: https://www.its-rde.net/

Description

Abstract: The Next Generation Simulation (NGSIM) program was initiated by the United States Department of Transportation (US DOT) Federal Highway Administration (FHWA) in the early 2000's. The program developed a core of open behavioral algorithms in support of traffic simulation with a primary focus on microscopic modeling, including supporting documentation and validation data sets that describe the interactions of multimodal travelers, vehicles and highway systems, and interactions presented to them from traffic control devices, delineation, congestion, and other features of the environment. NGSIM stakeholder groups identified the collection of real-world vehicle trajectory data as important to understanding and researching driver behavior. The Peachtree Street dataset was one of several detailed, high-quality datasets collected under the NGSIM effort that supported the development of algorithms for driver behavior at microscopic levels.

NGSIM program researchers collected detailed vehicle trajectory data on an arterial segment on Peachtree Street in Atlanta, GA, on November 8, 2006. This data was collected using eight video cameras mounted on a 30-story building, which is located at 1100 Peachtree Street NE, Atlanta, GA. NG-VIDEO, a customized software application developed for the NGSIM program, transcribed the vehicle trajectory data from the video. This vehicle trajectory data provided the precise location of each vehicle within the study area every one-tenth of a second, resulting in detailed lane positions and locations relative to other vehicles. A total of 30 minutes of data are available in the full dataset, which are segmented into two 15-minute periods (12:45 p.m. to 1:00 p.m. and 4:00 p.m. to 4:15 p.m.). In addition to the vehicle trajectory data, the Peachtree Street dataset also contains computer-aided design and geographic information system files, aerial ortho-rectified photos, detector tube data, signal timings, processed videos, and aggregate data analysis reports.

Purpose: The NGSIM program developed a core of open behavioral algorithms in support of traffic simulation with a primary focus on microscopic modeling, and collected high-quality primary traffic and trajectory data from Peachtree Street to support the research and testing of the new algorithms.

Time Period of Content

Time Period Information

Range of Dates:

Beginning Date: 20061107
Ending Date: 20061109

Currentness Reference:

Ground condition (i.e., the previous dates refer to the time the information was collected)

Status

Progress: Complete
Maintenance and Update Frequency: None planned

Spatial Domain

Bounding Coordinates (Peachtree Street)

West Bounding Coordinate: 33.7820148
East Bounding Coordinate: 33.7863572
North Bounding Coordinate: -84.3832206
South Bounding Coordinate: -84.3841482

Keywords

Theme

Theme Keyword: NGSIM
Theme Keyword: Arterial data
Theme Keyword: Simulation data
Theme Keyword: Behavioral algorithm

Place

Place Keyword: Atlanta

Temporal

Temporal Keyword: 2006

Access Constraints:

To access the data set, users must register through the USDOT Research Data Exchange (RDE) portal (https://www.its-rde.net/). The registration process will include a request for contact information and agreement to terms of use for the data What information is optional versus mandatory for registration has not been finalized ; however in order to encourage broad access and use, mandatory information will be kept to a minimum and ease of use maximized. See the RDE Terms of Use and Data Privacy Policy on how registration information is kept secure and for uses only applicable to the RDE administration.

User Constraints:

Those who use data and data processing tools distributed by the Research Data Exchange have the following responsibilities:

1. Where the contributed materials have been utilized to any extent to enable, verify, supplement or validate performance measurement, analysis, research or software development, to fully reference the Research Data Exchange Program and the contributions of the individuals in all subsequent and related publications or public events, specifically:
    a. In publications, reference the Research Data Exchange website and the date accessed, data and/or data processing tools (by name and version number), and the individual contributors identified on the reference template associated with each data and/or data processing tool.
    b. In presentations or other oral communication, by noting the data and/or data processing tool by name and version number, and communicating the address of the Research Data Exchange website.
2. Users are encouraged to accurately post and update within the Research Data Exchange website a description of the project utilizing the data and/or the data processing tools, including:
    a. A description of the project, including a brief statement of the project goals.
    b. A summary of the hypotheses and findings (when available) of the project.
    c. Individuals directing and/or substantively participating in the project.
    d. The name and version number of the data and/or data processing tools downloaded and utilized in the project.
    e. The current state of the project (upcoming, underway, completed).
    f. References to published materials (if any).
3. Users are encouraged to report anomalies, errors or other questionable data elements using the Data Forum of the Research Data Exchange website, referencing the specific data or data processing tool by name and version number.
4. To refrain from duplication and dissemination of the data and data processing tools to third parties.

    Publication of certain derived information such as location of residence, specific stores visited, purpose of trips, etc. must be cleared with the data set originator prior to publication.

Point of Contact

Contact Information

Contact Organization Primary

Contact Organization: FHWA
Contact Person: James Colyar
Contact Electronic Mail Address: james.colyar@dot.gov

Contact Organization Secondary

Contact Organization: Cambridge Systematics, Inc.
Contact Person: Vassili Alexiadis
Contact Electronic Mail Address: valexiadis@camsys.com

National Highway Traffic Safety Administration (NHTSA) Security Information

Security Classification: Unclassified

Native Data Set Environment:

Documentation: The data are contained in eight data sets on the RDE, as follows:

1. Aerial Ortho photos (2 files in TFW and TIF formats)
2. CAD diagrams (1 file in DWG format)
3. Detector data (30 files both in CSV and TXT format)
4. GIS files (5 files in various formats)
5. Signal Data: Signal change data (32 files both in CSV and TXT format); Signal timing sheets (4 files in PDF format)
6. Vehicle trajectory data (2 files in both CSV and TXT format)
7. Processed video (1 file in AVI format)
8. Data Analysis reports (2 files in both PDF and DOC format)

Note: TXT files are the original data files; CSV files are the converted data files. To ensure proper data, use the TXT files.

Cross Reference:

The data sets and corresponding metadata for fellow NGSIM data environments (I-80 in Emeryville, CA, US 101 in Los Angeles, CA, and Lankershim Boulevard in Los Angeles, CA) are also available on the RDE.

Data Quality Information

Attribute Accuracy: No accuracy assessment has been performed for the data set.

Completeness Report: The USDOT does not make any claims regarding data completeness. There may be gaps in the data provided.

Lineage

Source Information

Source Citation

Citation Information

Originator: FHWA
Publication Date: 2005

Process Step

Process Description: The vehicle tracking process consisted of capturing video data of a roadway, preprocessing the video images, and then extracting the vehicle trajectories from the video. The

Trajectory Extraction phase involved using the NG-VIDEO software to track vehicles and put the trajectory data into a database. The disaggregate trajectory data was then processed to provide data inputs for algorithm research.

Process Contact:

Contact Information

Contact Organization Primary

Contact Organization: Cambridge Systematics
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Contact Person: Lin Zhang
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Entity and Attribute Information

Aerial Ortho Photos

This directory contains ortho-rectified photographs of the study area.

Files:

- **Atlanta-Peachtree.tif**
  The aerial image file coordinates are in NAD83 (the units are US Survey Feet).The ortho-rectified photographs are at a resolution of 1":1000' and a pixel resolution of 0.25 feet. The photographs provide a relative accuracy of 2.5 feet. Please note that the tif file is about 800 MB in size. Due to the size of this file, problems in opening the file in some photo editors may be encountered. ArcGIS software is capable of opening the file.
- **Atlanta-Peachtree.tfw**
  Support for Atlanta-Peachtree.tif;

CAD Drawings

This directory contains CAD drawings of the study area. The CAD drawings were developed using the ortho-rectified photographs

Files:

- **Atlanta-Peachtree.dwg**
  The dwg file provides a CAD drawing of the vehicle trajectory study area. A highly detailed representation of the network required for accurately transcribing vehicle trajectories is provided in the CAD network.

Data Analysis

This directory presents aggregation of vehicle trajectory results to provide common macroscopic flow parameters. The results provided in the report include aggregations of flows, speeds and number of lane changes. Aggregation is conducted by intersection and origin-destination pairs.

Files:

- **data-analysis-report-1245pm-0100pm.pdf**
  Contains data aggregation for 12:45 p.m. to 1:00 p.m. on November 8th, 2006 for Peachtree Street in Atlanta, GA. Origin-destination, intersection volume, speed and headways aggregations are provided. Lane changes by origin-destinations are also provided in the data analysis report.
- **data-analysis-report-0400pm-0415pm.pdf**
  Contains data aggregation for 4:00 p.m. to 4:15 a.m. on November 8th, 2006 for Peachtree Street in Atlanta, GA. Origin-destination, intersection volume, speed and headways aggregations are provided. Lane changes by origin-destinations are also provided in the data analysis report.

GIS Files

This directory provides geographic network data in the form of shapefiles. The files provide the geometry and attribute information for the area.

Files:

- **camera-coverage.shp**
  This file provides the coverage of each of the eight cameras. The camera number and the length of coverage are provided.
- **camera-coverage.dbf**
  Support for camera-coverage.shp;
- **camera-coverage.shx**
  Support for camera-coverage.shp;

Processed Video

This directory contains processed video data from one of the eight cameras for the time period used for data reduction. The file provides video of the vehicles' positions along with a superimposition of the vehicle identification numbers and extracted vehicle dimensions and trajectories. This data is provided to users to allow cross referencing of the vehicle trajectory data with the corresponding video. This data is provided to users so that they may have a visual sense of the extracted data. The video is compressed using open-sourced XviD codec. If you are having trouble opening the file, please download the codec from http://www.koepi.org/xvid.shtml. The XviD file used for compressing the file is XviD-1.0.3-20122004.exe, a self extracting binary file.

Files:

- **peachtree-camera1-1245pm-0100pm-processed.avi**

Signal Timing Data

This directory contains timing sheets and signal change data for the traffic signals present in the study area.

Signal Change Data

Signal data were extracted from videos recording signal changes in the field. There are six columns indicating signal changes as described in the attribute list below. In the case of no separate left turn signals, there are only three columns for combined left turn and through movements. The file names contain intersection name, movement direction, and time periods.

Files:

- **Peachtree_10th_NB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 10th Street north-bound between 12:45pm-01:00pm.
- **Peachtree_10th_NB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 10th Street north-bound between 04:00pm-04:15pm.
- **Peachtree_10th_EB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 10th Street east-bound between 12:45pm-01:00pm.
- **Peachtree_10th_EB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 10th Street east-bound between 04:00pm-04:15pm.
- **Peachtree_10th_SB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 10th Street south-bound between 12:45pm-01:00pm.
- **Peachtree_10th_SB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 10th Street south-bound between 04:00pm-04:15pm.
- **Peachtree_10th_WB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 10th Street west-bound between 12:45pm-01:00pm.
- **Peachtree_10th_WB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 10th Street west-bound between 04:00pm-04:15pm.
- **Peachtree_11th_NB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 11th Street north-bound between 12:45pm-01:00pm.
- **Peachtree_11th_NB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 11th Street north-bound between 04:00pm-04:15pm.
- **Peachtree_11th_EB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 11th Street east-bound between 12:45pm-01:00pm.
- **Peachtree_11th_EB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 11th Street east-bound between 04:00pm-04:15pm.
- **Peachtree_11th_SB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 11th Street south-bound between 12:45pm-01:00pm.
- **Peachtree_11th_SB_0400-0415**

This signal data is at the intersection of Peachtree Street and 11th Street south-bound between 04:00pm-04:15pm.

- **Peachtree_11th_WB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 11th Street west-bound between 12:45pm-01:00pm.
- **Peachtree_11th_WB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 11th Street west-bound between 04:00pm-04:15pm.
- **Peachtree_12th_NB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 12th Street north-bound between 12:45pm-01:00pm.
- **Peachtree_12th_NB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 12th Street north-bound between 04:00pm-04:15pm.
- **Peachtree_12th_EB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 12th Street east-bound between 12:45pm-01:00pm.
- **Peachtree_12th_EB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 12th Street east-bound between 04:00pm-04:15pm.
- **Peachtree_12th_SB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 12th Street south-bound between 12:45pm-01:00pm.
- **Peachtree_12th_SB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 12th Street south-bound between 04:00pm-04:15pm.
- **Peachtree_12th_WB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 12th Street west-bound between 12:45pm-01:00pm.
- **Peachtree_12th_WB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 12th Street west-bound between 04:00pm-04:15pm.
- **Peachtree_14th_NB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 14th Street north-bound between 12:45pm-01:00pm.
- **Peachtree_14th_NB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 14th Street north-bound between 04:00pm-04:15pm.
- **Peachtree_14th_EB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 14th Street east-bound between 12:45pm-01:00pm.
- **Peachtree_14th_EB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 14th Street east-bound between 04:00pm-04:15pm.
- **Peachtree_14th_SB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 14th Street south-bound between 12:45pm-01:00pm.
- **Peachtree_14th_SB_0400-0415**
  This signal data is at the intersection of Peachtree Street and 14th Street south-bound between 04:00pm-04:15pm.
- **Peachtree_14th_WB_1245-0100**
  This signal data is at the intersection of Peachtree Street and 14th Street west-bound between 12:45pm-01:00pm.
- **Peachtree_14th_WB_0400-0415**

This signal data is at the intersection of Peachtree Street and 14th Street west-bound between 04:00pm-04:15pm.

Attribute

Attribute Label: BG_Left (Column A)
Attribute Definition: Frame number in the trajectories data that marks the beginning of the green left turn phase.
Attribute Domain Values: Integer

Attribute

Attribute Label: BY_Left (Column B)
Attribute Definition: Frame number in the trajectories data that marks the beginning of the yellow left turn phase.
Attribute Domain Values: Integer

Attribute

Attribute Label: BR_Left (Column C)
Attribute Definition: Frame number in the trajectories data that marks the beginning of the red left turn phase.
Attribute Domain Values: Integer

Attribute

Attribute Label: BG_Thru (Column D)
Attribute Definition: Frame number in the trajectories data that marks the beginning of the green through phase.
Attribute Domain Values: Integer

Attribute

Attribute Label: BY_Thru (Column E)
Attribute Definition: Frame number in the trajectories data that marks the beginning of the yellow through phase.
Attribute Domain Values: Integer

Attribute

Attribute Label: BR_Thru (Column F)
Attribute Definition: Frame number in the trajectories data that marks the beginning of the red through phase.
Attribute Domain Values: Integer

Signal Timing Sheets

Files:

- **int51.pdf**
  The timing sheet provides the controller settings for intersection 51 - Peachtree Street and 10th Street.
- **int52.pdf**
  The timing sheet provides the controller settings for intersection 52 - Peachtree Street and 11th Street.
- **int53.pdf**
  The timing sheet provides the controller settings for intersection 53 - Peachtree Street and 12th Street.
- **int73.pdf**
  The timing sheet provides the controller settings for intersection 73 - Peachtree Street and 14th Street.

Tube Detector Data

Wide-area tube count data was collected for the Peachtree Street study area. Tube data at five intersections in the study area are presented for three days, from November 7 to November 9, 2006 at an aggregation of 15 minutes. This data set complements the vehicle trajectory data collection effort by providing information on volumes and occupancy at the vehicle trajectory study area. The file names contain intersection name, location, and movement direction.

Files:

- **PEACHTREE_NORTH OF 10TH ST_NB**
  This tube data is for the north-bound traffic on north side of the intersection at Peachtree Street and 10th Street.
- **PEACHTREE_NORTH OF 10TH ST_SB**
  This tube data is for the south-bound traffic on north side of the intersection at Peachtree Street and 10th Street.
- **10TH ST_EAST OF PEACHTREE _EB**
  This tube data is for the east-bound traffic on east side of the intersection at Peachtree Street and 10th Street.
- **10TH ST_EAST OF PEACHTREE_WB**
  This tube data is for the west-bound traffic on east side of the intersection at Peachtree Street and 10th Street.
- **10TH ST_WEST OF PEACHTREE_WB**
  This tube data is for the west-bound traffic on west side of the intersection at Peachtree Street and 10th Street.
- **10TH ST_WEST OF PEACHTREE_EB**
  This tube data is for the east-bound traffic on west side of the intersection at Peachtree Street and 10th Street.
- **PEACHTREE SOUTH OF 10TH ST_NB**
  This tube data is for the north-bound traffic on south side of the intersection at Peachtree Street and 10th Street.
- **PEACHTREE SOUTH OF 10TH ST_SB**
  This tube data is for south-bound traffic on south side of the intersection at Peachtree Street and 10th Street.
- **PEACHTREE_NORTH OF 11TH ST_NB**
  This tube data is for the north-bound traffic on north side of the intersection at Peachtree Street and 11th Street.
- **PEACHTREE_NORTH OF 11TH ST_SB**
  This tube data is for the south-bound traffic on north side of the intersection at Peachtree Street and 11th Street.
- **11TH ST_EAST OF PEACHTREE_EB**
  This tube data is for the east-bound traffic on east side of the intersection at Peachtree Street and 11th Street.
- **11TH ST_EAST OF PEACHTREE_WB**
  This tube data is for the west-bound traffic on east side of the intersection at Peachtree Street and 11th Street.
- **11TH ST_WEST OF PEACHTREE_EB**
  This tube data is for the east-bound traffic on west side of the intersection at Peachtree Street and 11th Street.
- **11TH ST_WEST OF PEACHTREE_WB**
  This tube data is for the west-bound traffic on west side of the intersection at Peachtree Street and 11th Street.
- **PEACHTREE_NORTH OF 12TH ST_NB**
  This tube data is for the north-bound traffic on north side of the intersection at Peachtree Street and 12th Street.
- **PEACHTREE_NORTH OF 12TH ST_SB**

This tube data is for the south-bound traffic on north side of the intersection at Peachtree Street and 12th Street.

- **12TH ST_EAST OF PEACHTREE_EB**
  This tube data is for the east-bound traffic on east side of the intersection at Peachtree Street and 12th Street.
- **12TH ST_EAST OF PEACHTREE_WB**
  This tube data is for the west-bound traffic on east side of the intersection at Peachtree Street and 12th Street.
- **12TH ST_WEST OF PEACHTREE_EB**
  This tube data is for the east-bound traffic on west side of the intersection at Peachtree Street and 12th Street.
- **12TH ST_WEST OF PEACHTREE_WB**
  This tube data is for the west-bound traffic on west side of the intersection at Peachtree Street and 12th Street.
- **13TH ST_EAST OF PEACHTREE_EB**
  This tube data is for the east-bound traffic on east side of the intersection at Peachtree Street and 13th Street.
- **13TH ST_EAST OF PEACHTREE_WB**
  This tube data is for the west-bound traffic on east side of the intersection at Peachtree Street and 13th Street.
- **PEACHTREE_NORTH OF 14TH ST_NB**
  This tube data is for the north-bound traffic on north side of the intersection at Peachtree Street and 14th Street.
- **PEACHTREE_NORTH OF 14TH ST_SB**
  This tube data is for the south-bound traffic on north side of the intersection at Peachtree Street and 14th Street.
- **14TH ST_EAST OF PEACHTREE_EB**
  This tube data is for the east-bound traffic on east side of the intersection at Peachtree Street and 14th Street.
- **14TH ST_EAST OF PEACHTREE_WB**
  This tube data is for the west-bound traffic on east side of the intersection at Peachtree Street and 14th Street.
- **PEACHTREE_SOUTH OF 14TH ST_NB**
  This tube data is for the north-bound traffic on south side of the intersection at Peachtree Street and 14th Street.
- **PEACHTREE_SOUTH OF 14TH ST_SB**
  This tube data is for the south-bound traffic on south side of the intersection at Peachtree Street and 14th Street.
- **14TH ST_WEST OF PEACHTREE_EB**
  This tube data is for the east-bound traffic on west side of the intersection at Peachtree Street and 14th Street.
- **14TH ST_WEST OF PEACHTREE_WB**
  This tube data is for the west-bound traffic on west side of the intersection at Peachtree Street and 14th Street.

Attribute

Attribute Label: Date (Column A)
Attribute Definition: The date data were collected.
Attribute Domain Values: Date (mm/dd/yyyy)

Attribute

Attribute Label: Time (Column B)
Attribute Definition: The time data were collected.
Attribute Domain Values: Time (hh:mm:ss)

Attribute

Attribute Label: Volume (Column C)

Attribute Definition: Number of vehicles passing through a tube station per hour.
Attribute Domain Values: Integer

Vehicle Trajectory Data

Vehicle trajectory data was collected on Peachtree Street in Atlanta, Georgia on November 8, 2006. Data from 12:45 p.m. to 1:00 p.m., and 4:00 p.m. to 4:15 p.m is included. This data was collected using eight video cameras mounted on a 30-story building, which is located at1100 Peachtree Street NE, Atlanta, GA. Vehicle trajectory data were transcribed from the video data using a customized software application, Next Generation Simulation - Vehicle Interaction and Detection Environment for Operations (NGSIM-VIDEO), developed for NGSIM. This program was used to automatically detect and track most vehicles from the video images and transcribe the trajectory data to a database. Manual transcription was used to track any vehicles which failed to be automatically detected and tracked. The data provides X, Y coordinates of each vehicle, every 1/10th of a second in relative space and in NAD83 (the units are US Survey Feet). Time is given in Epoch time, which is the elapsed time since midnight (beginning of the calendar day) GMT on January 1, 1970 in milliseconds. This elapsed epoch time must be shifted to the US Pacific time zone for comparisons to local time at the highway. During the data collection period, no traffic incidents were recorded within the study area or on any adjacent locations likely influencing traffic in the study area.

Files:

- **trajectories-1245pm-0100pm**
  This file contains all vehicle trajectories for the specified time period, sorted by time. The X accuracy of this data set is estimated at around 2 feet and the Y accuracy is estimated at around 4 feet. The start time for the trajectory data set corresponds to 12:45:00 p.m. in the Real-time Split Monitor (RSM) report.
- **trajectories-0400pm-0415pm**
  This file contains all vehicle trajectories for the specified time period, sorted by time. The X accuracy of this data set is estimated at around 2 feet and the Y accuracy is estimated at around 4 feet. The start time for the trajectory data set corresponds to 4:00:00 p.m. in the Real-time Split Monitor (RSM) report

Attribute

Attribute Label: Vehicle_ID (Column A)
Attribute Definition: Vehicle identification number (ascending by time of entry into section)
Attribute Domain Values: Integer

Attribute

Attribute Label: Frame_ID (Column B)
Attribute Definition: Frame Identification number (ascending by start time)
Attribute Domain Values: Integer

Attribute

Attribute Label: Total_Frames (Column C)
Attribute Definition: Total number of frames in which the vehicle appears in this data set.
Attribute Domain Values: Integer

Attribute

Attribute Label: Global_Time (Column D)
Attribute Definition: Elapsed time in milliseconds since Jan 1, 1970 (Epoch time).
Attribute Domain Values: Integer

Attribute

Attribute Label: Local_X (Column E)

Attribute Definition: Lateral (X) coordinate of the front center of the vehicle - perpendicular to the median of the Peachtree Street. Measured in feet. Vehicles traveling on the east side of the median have positive Local X values, while those traveling on the west side of the median have negative Local X values
Attribute Domain Values: Double

Attribute

Attribute Label: Local_Y (Column F)
Attribute Definition: Longitudinal (Y) coordinate of the front center of the vehicle along the median of the Peachtree Street. Measured in feet. The start point is at the southern boundary of the study area.
Attribute Domain Values: Double

Attribute

Attribute Label: Global_X (Column G)
Attribute Definition: X Coordinate of the front center of the vehicle based on Georgia West State Plane in NAD83. Measured in feet.
Attribute Domain Values: Double

Attribute

Attribute Label: Global_Y (Column H)
Attribute Definition: Y Coordinate of the front center of the vehicle based on Georgia West State Plane in NAD83. Measured in feet.
Attribute Domain Values: Double

Attribute

Attribute Label: v_Length (Column I)
Attribute Definition: Length of vehicle in feet.
Attribute Domain Values: Double

Attribute

Attribute Label: v_Width (Column J)
Attribute Definition: Width of vehicle in feet
Attribute Domain Values: Double

Attribute

Attribute Label: v_Class (Column K)
Attribute Definition: Vehicle type: 1 - motorcycle, 2 - auto, 3 - truck
Attribute Domain Values: Integer

Attribute

Attribute Label: v_Vel (Column L)
Attribute Definition: Instantaneous velocity of vehicle (feet/second).
Attribute Domain Values: Double

Attribute

Attribute Label: v_Acc (Column M)
Attribute Definition: Instantaneous acceleration of vehicle (feet/second square).
Attribute Domain Values: Double

Attribute

Attribute Label: Lane_ID (Column N)
Attribute Definition: Current lane position of vehicle. Lane numbering is incremented from the left-most lane, except for locations where left-turn or right-turn bays exist. Left-turn bays are numbered starting from 11 and are incremented from the left-most left-turn bay.
Attribute Domain Values: Integer

Attribute

Attribute Label: O_Zone (Column O)
Attribute Definition: Origin zones of the vehicles, i.e., the place where the vehicles enter the tracking system. There are 21 origins in the study area, numbered from 101 through 123.

Destination 204 and 209 are a one-way off-ramp; hence, there are no associated origin number 104 and 109. Please refer to the data analysis report for more detailed information.
Attribute Domain Values: Integer

Attribute

Attribute Label: D_Zone (Column P)
Attribute Definition: Destination zones of the vehicles, i.e., the place where the vehicles exit the tracking system. There are 22 destinations in the study area, numbered from 201 through 223. Origin 119 is a one-way off-ramp; hence there is no associated destination number 219. Please refer to the data analysis report for more detailed information.
Attribute Domain Values: Integer

Attribute

Attribute Label: Int_ID (Column Q)
Attribute Definition: Intersection in which the vehicle is traveling. Intersections are numbered from 1 to 5, with intersection 1 at the southernmost, and intersection 5 at the northernmost section of the study area. Value of “0” means that the vehicle was not in the immediate vicinity of an intersection and that the vehicle instead identifies with a section of Peachtree Street (Section_ID, below). Please refer to the data analysis report for more detailed information.
Attribute Domain Values: Integer

Attribute

Attribute Label: Section_ID (Column R)
Attribute Definition: Section in which the vehicle is traveling. Peachtree Street is divided into six sections (south of intersection 1; between intersections 1 and 2, 2 and 3, 3 and 4, 4 and 5, 5 and 6; and north of intersection 6). Value of “0” means that the vehicle does not identify with a section of Peachtree Street and that the vehicle was in the immediate vicinity of an intersection (Int_ID above). Please refer to the data analysis report for more detailed information.
Attribute Domain Values: Integer

Attribute

Attribute Label: Direction (Column S)
Attribute Definition: Moving direction of the vehicle. 1 - east-bound (EB), 2 - north-bound (NB), 3 - west-bound (WB), 4 - south-bound (SB).
Attribute Domain Values: Integer

Attribute

Attribute Label: Movement (Column T)
Attribute Definition: Movement of the vehicle. 1 - through (TH), 2 - left-turn (LT), 3 - right-turn (RT).
Attribute Domain Values: Integer

Attribute

Attribute Label: Preceding (Column U)
Attribute Definition: Vehicle ID of the lead vehicle in the same lane. A value of '0' represents no preceding vehicle.
Attribute Domain Values: Integer

Attribute

Attribute Label: Following (Column V)
Attribute Definition: Vehicle ID of the vehicle following the subject vehicle in the same lane. A value of '0' represents no following vehicle.
Attribute Domain Values: Integer

Attribute

Attribute Label: Space_Headway (Column W)
Attribute Definition: Space Headway. Provides the distance between the front-center of a vehicle to the front-center of the preceding vehicle. Measured in feet.
Attribute Domain Values: Double

Attribute

Attribute Label: Time_Headway (Column X)
Attribute Definition: Time Headway. Provides the time to travel from the front-center of a vehicle (at the speed of the vehicle) to the front-center of the preceding vehicle. A headway value of 9999.99 means that the vehicle is traveling at zero speed (congested conditions). Measured in seconds.
Attribute Domain Values: Double

Distribution Information

Distributor

Contact Information

Contact Organization Primary

Contact Organization: Noblis
Contact Electronic Mail Address: richard.glassco@noblis.org

Metadata Reference Information

Metadata Date: 20160328
Metadata Review Date: 20160328
Metadata Future Review Date: not scheduled

Metadata Contact

Contact Information

Contact Organization Primary

Contact Organization: Noblis
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